



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/059,833 | 01/30/2002 | Takashi Murata | MURATA ET AL-1 | 5693 |

7590 01/28/2003

COLLARD & ROE, P.C.
1077 Northern Boulevard
Roslyn, NY 11576

EXAMINER

BOLDEN, ELIZABETH A

ART UNIT

PAPER NUMBER

1755

DATE MAILED: 01/28/2003

3

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/059,833

Applicant(s)

MURATA ET AL.

Examiner

Elizabeth A. Bolden

Art Unit

1755

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2. 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-16 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Miwa, U.S. 5,851,939.

Miwa discloses an alkali free glass substrate having compositional ranges that overlap the compositional limitations of claims 1, 2, 7, 9, 10, and 13-15. See abstract and column 4, lines 29-31. These overlapping ranges are sufficiently specific to anticipate the compositional limitations of claims 1, 2, 7, 9, 10, and 13-15. See MPEP 2131.03. Miwa discloses that the glass substrate is used for display technologies including liquid crystal displays and EL displays, and polycrystalline silicon TFT. See column 1, lines 11-14 and 60-61. Furthermore, examples 2, 8, and 9 meet the compositional, density, and strain temperature limitations of claims 1, 2, 10, and 14.

Since the composition of the reference is the same as those claimed herein it follows that the glasses of Miwa would inherently possess the same coefficient of thermal expansion, liquidus

temperature, liquidus temperature viscosity, erosion, haze and roughness resistance, specific modulus, and thickness as recited in claims 1, 3-6, and 12. See MPEP 2112.

As to claim 8, the recitation that the glass is formed by the “down-draw process” is a process recitation in a product. Product claims including process recitations are not limited by the manipulation of the recited steps, only the structure implied by the steps. See 2113. In the present instance, the process steps imply that the glass is in the form of a plate. The reference discloses such a product. See column 4, lines 60-61.

Claims 1-16 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Kohli, U.S. 6,060,168.

Kohli discloses an aluminosilicate glass having compositional ranges that overlap the compositional limitations of claims 1, 2, 7, 9, 10, and 13-15. See abstract and column 2, lines 66-67. Kohli discloses that the glass has a coefficient of thermal expansion of $30-39 \times 10^{-7}/^{\circ}\text{C}$, Liquidus temperature of below 1250°C , and a strain point of greater than 650°C . See column 2, lines 55-56, column 3, 59-52, and column 4, line 1. These overlapping ranges are sufficiently specific to anticipate the compositional and property limitations of claims 1-3, 7, 9, 10, and 13-15. See MPEP 2131.03. Kohli discloses that the glass is suitable for flat panel displays, which include polycrystalline silicon thin film transistors (TFT). See column 1, lines 8-10 and 42-44. Furthermore, example 12 meets the compositional, density, CTE, and Liquidus and Strain temperature limitations of claims 1-3, 10, and 14. See Table I.

Since the composition of the reference is the same as those claimed herein it follows that the glasses of Kohli would inherently possess the same liquidus temperature viscosity, erosion,

haze and roughness resistance, specific modulus, and thickness as recited in claims 3-6 and 12. See MPEP 2112.

As to claim 8, the recitation that the glass is formed by the “down-draw process” is a process recitation in a product. Product claims including process recitations are not limited by the manipulation of the recited steps, only the structure implied by the steps. See 2113. In the present instance, the process steps imply that the glass is in the form of a plate. The reference discloses such a product. See column3, lines 25-27.

Claims 1, 3-8, 10-12, 14, and 16 are rejected under 35 U.S.C. 102(a) as being clearly anticipated by Peuchert et al., German Patent DE 100 00 836 A1.

This rejection is over the German patent because this reference qualifies as prior art under 35 U.S.C. 102(a). However, for convenience, the column and line numbers of the English language equivalent U.S. Patent Application Publication No. US 20002/0032117 A1 will be cited below.

Peuchert et al. disclose an alkali-free aluminosilicate glass having compositional ranges that overlap the compositional limitations of claims 1, 7, 10, and 14. See abstract and page 2, paragraph [0038]. Peuchert et al. disclose that the glass has a coefficient of thermal expansion of $2.8-3.8 \times 10^{-6}/^{\circ}\text{C}$ and a density less than 2.6 g/cm^3 . See page 5, paragraphs [0054] and [0056]. These overlapping ranges are sufficiently specific to anticipate the compositional and property limitations of claims 1, 3-8, 10-12, 14, and 16. See MPEP 2131.03. Peuchert et al. disclose that the glass is suitable for flat panel displays, which include polycrystalline silicon thin film

Art Unit: 1755

transistors (TFT). See abstract and paragraph [0007]. Furthermore, examples 9-11 meet the compositional, density, and CTE limitations of claims 1, 10, and 14. See Table.

Since the composition of the reference is the same as those claimed herein it follows that the glasses of Peuchert et al. would inherently possess the same strain and liquidus temperatures, liquidus temperature viscosity, erosion, haze and roughness resistance, specific modulus, and thickness as recited in claims 3-6 and 12. See MPEP 2112.

The reference discloses that the glass can be produced by various methods including down-draw methods. See page 5, paragraph [0060].

Claims 1-16 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Lautenschlager et al., European Patent EP 1070681 A1.

This rejection is over the European patent because this reference qualifies as prior art under 35 U.S.C. 102(b). However, for convenience, the column and line numbers of the English language equivalent U.S. Patent No. US 6,465,381 B1 will be cited below.

Lautenschlager et al. disclose an alkali-free aluminosilicate glass having compositional ranges that overlap the compositional limitations of claims 1, 2, 7, 9, 10, 13-15. See abstract and column 7, lines 25-27 and 39-41. Lautenschlager et al. disclose that the glass has a coefficient of thermal expansion of $3.0-3.8 \times 10^{-6}/^{\circ}\text{C}$, density less than 2.5 g/cm^3 , and strain temperature (viscosity of $10^{14.5} \text{ dPas}$) of at least 680°C . See column 11, lines 41-54 and 64-65. These overlapping ranges are sufficiently specific to anticipate the compositional and property limitations of claims 1-16. See MPEP 2131.03. Lautenschlager et al. disclose that the glass is

Art Unit: 1755

suitable for flat panel displays, which include polycrystalline silicon thin film transistors (TFT).

See abstract and column 1, lines 34-37.

Since the composition of the reference is the same as those claimed herein it follows that the glasses of Lautenschlager et al. would inherently possess the same liquidus temperature, liquidus temperature viscosity, erosion, haze and roughness resistance, specific modulus, and thickness as recited in claims 3-6 and 12. See MPEP 2112.

The reference discloses that the glass can be produced by various methods including microsheet down-draw method producing sheets with thickness between 30 and 50 μ m. See column 4, lines 59-62.

Conclusion

The additional references cited on the 892 have been cited as art of interest since they are cumulative to or less than the art relied upon in the rejections above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth A. Bolden whose telephone number is 703-305-0124. The examiner can normally be reached on 8:30am to 6:00 pm with alternating Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark L. Bell can be reached on 703-308-3823. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Application/Control Number: 10/059,833

Page 7

Art Unit: 1755

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

EAB
January 22, 2003



DAVID SAMPLE
PRIMARY EXAMINER